

a sensor mountable to the second structure to move intermediate an open state and a close state to open and close the electric connection, the sensor comprising a first member that is arranged for displacement relative to a second member intermediate an open condition and a closed condition in response to magnetic flux, the first member  
5 defining a first axis,

a magnetic actuator arranged to be secured to the second member, the magnetic actuator having a plurality of aligned, alike magnetic fields being substantially aligned adjacent to one another to form a second axis, wherein each magnetic field has a pole of opposite polarity such that like poles are arranged adjacent to one another to define an  
10 effective region of magnetic flux having a flux magnitude in excess of a region of magnetic flux of any one magnet, the effective region of magnetic flux aligned along the second axis,

wherein said switch is in the open state when said first contact member is in the open state displaced away from the second member so that the electric connection is  
15 open,

wherein switch is in the closed state when the first contact member is displaced to the closed state in proximity to the second contact member so that the electric connection is closed,

whereby the effective region of magnetic flux permits the first structure to be  
20 displaced relative to the second structure over a desired first distance having an effective displacement magnitude than a second distance defined by the magnetic flux of any one of the plurality of magnets.

38. A magnetically actuated apparatus for use with first and second support structures arranged for movement relative to one another, the apparatus being used to  
25 control an electric connection, the apparatus comprising:

a control device mountable to the first support structure for opening and closing the electric connection, the control device comprising a magnetically actuated contact for controlling electric current flowing to the electric connection in response to magnetic flux, the contact having an open state and a closed state, wherein the contact moves  
30 between the open state and the closed state within a predetermined magnetic actuation area,